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my chemical; romance

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The health-conscious among us take care to avoid notorious risks such as mercury-laden fish, lead paint and cigarette smoke -- all of which contain chemicals proven to do a body bad.

But do you ever think twice about the lotion you smear on your face, the can of soda you gulp down or the furniture you nap on? Countless products we use every day are chock full of chemicals, and research suggests they might hurt us more than we realize.

Americans are virtual petri dishes of industrial chemicals, which make their way from products into our bodies. The Centers for Disease Control and Prevention, which tests more than 2,000 people in an ongoing study, has found 148 synthetic substances flowing through our bodies, many of which didn't exist half a century ago. Last year, a coalition of environmental groups measured chemicals in the blood and urine of 35 Americans from across the country and found that all participants contained flame retardants and 95 percent contained chemicals commonly found in plastics.

It isn't certain that these chemicals are causing people harm.

A growing body of research links certain household chemicals to cancer and reproductive abnormalities. Government regulatory agencies have in some cases pressured companies to stop producing chemicals that have raised red flags. Yet the government has stopped short of saying the products containing those chemicals pose a safety risk.

The chemicals industry, meanwhile, can cite studies showing the levels in consumer products aren't harmful to humans.

We often don't know we're exposed to these chemicals -- found in everyday products such as cosmetics, stain-resistant upholstery and food packaging. After all, companies aren't required to list the chemicals used to manufacture an aluminum can or a candy wrapper.

While the mere presence of chemicals is no cause for alarm, it may surprise people that most chemicals aren't tested for safety before entering the market. The Toxic Substances Control Act of 1976 grandfathered in about 60,000 of the 82,000 chemicals used today. Only when companies alert the Environmental Protection Agency to potential safety concerns does the agency re-examine the health effects. To Charlotte Brody, executive director of Commonweal, an environmental health research center in California, assuming chemicals are innocent until proven guilty is shortsighted. Europe, by contrast, requires companies to prove chemicals are safe before they hit the market.

"The rules [in the U.S.] treat chemicals like a person charged with a crime, and you have to prove beyond any reasonable doubt that this chemical caused this disease," Brody said. "But it's rarely true that a single chemical can cause a single disease."

There has been little research into the cumulative health effects of all the industrial chemicals to which we're exposed, but environmentalists and scientists note that the rise in the use of chemicals has coincided with the rise of certain diseases.

"The real clue is what's happening across the population in terms of diseases that are on the rise, from children's cancer to asthma to diabetes to breast cancer," said Jane Houlihan, vice president for research for the Environmental Working Group, a Washington-based research organization. "These increases can't be explained by rapid changes in genetics."

Here's a snapshot of some of the chemicals that may lurk in your everyday products.

Non-stick cookware, fast food wrappers, stain-resistant fabric ...

The chemicals used to keep grease off of food packaging and stains off of furniture have a habit of clinging to our bodies -- and could be harmful to our health.

The culprit is a chemical called perfluorooctanoic acid (PFOA), a processing aid most famously used in the manufacture of Teflon, the slippery stuff that keeps gunk off your non-stick cookware and stains off fabric. Other products that aren't manufactured with PFOA still contain it as a byproduct of other chemicals, including food packaging such as fast food containers, butter boxes, candy wrappers and microwave popcorn bags.

PFOA has been found in 98 percent of people, according to the CDC, and it remains in the body for a long time. Exactly how we are exposed to PFOA isn't known, but it is believed we can breathe it in, absorb it through our skin or ingest it when it leaches from packaging into food -- a process exacerbated under high heat, like when microwaving popcorn, Houlihan said.

High exposure to PFOA has been linked to cancer, liver damage and birth defects. A study released last year by the Johns Hopkins Bloomberg School of Public Health found that babies with the highest exposures to PFOA in utero had lower birth weights and smaller head circumferences.

In 2006, the Environmental Protection Agency's Scientific Advisory Panel named PFOA a "likely human carcinogen." Shortly after, eight companies that use PFOA -- including DuPont, maker of Teflon -- entered into a voluntary agreement with the EPA to eliminate emissions and product content of PFOA by 2015. The EPA announced last month that the companies are on track to meet the goal of 95 percent reduction in PFOA by 2010.

Still, DuPont -- which paid a heavy fine to the EPA for failing to report internal studies on the health risks of PFOA and settled a lawsuit that alleged PFOA-contaminated drinking water near a DuPont plant -- insists that PFOA does not pose a health risk to the general public. The EPA also says there's no cause for concern about the routine use of household products, but it did pressure PFOA manufacturers to stop producing it.